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Lawrence Morrin
Regional Director
Bureau of Indian Affairs
Southwest Regional Office
P.O. Box 26567
Albuquerque, NM 87125

Dear Mr. Morrin:

On July 18-20, Dave Conklin of our staff met with Bill Hornsby of the Mescalero Agency to evaluate a proposed FY 2007 dwarf mistletoe control project on the Mescalero Apache Reservation. They also examined recently treated portions of an FY 2006 project area and some areas affected by recent budworm and looper activity. Robert Campbell and Rylee Chino-Montoya of the Mescalero Agency participated in some of these site visits. This letter describes the proposed FY 2007 project area and planned treatment, summarizes observations from the FY 2006 project area, and provides supporting documentation for the Agency's western spruce budworm monitoring project, also proposed for FY 2007.

The **FY 2007 proposal (Project 1)** includes follow-up treatment in 760 acres of recently harvested mixed conifer forest in the Elk-Silver logging unit. This is a largely contiguous area located along the east side of Morgan Canyon. Elevations range from about 8000 to 8400 feet and site quality is moderate to good. Douglas-fir, white fir, ponderosa pine, and southwestern white pine--in decreasing order of abundance--are all well represented. The ponderosa pine component has been greatly reduced in recent decades because of bark beetle activity, dwarf mistletoe infection, and shade intolerance.

Dwarf mistletoe affects the ponderosa pine on at least half the acreage. Douglas-fir dwarf mistletoe has a more limited distribution, but is severe in some locations. Fir engraver beetle has caused scattered mortality of white fir the past few years. Western spruce budworm defoliation from a new, developing outbreak was visible on Douglas-fir and white fir throughout most of the area. The majority of the white pines had flagging or topkill from blister rust.

Approximately 82 % of this area was logged under an uneven-aged, single-tree selection prescription, with the remainder designated as shelterwood. Pre-sale basal areas in the single-tree selection stands averaged 175 ft^2/acre; these now average about 70 ft^2. Shelterwood blocks—which generally have more extensive dwarf mistletoe infestation than the single-tree selection areas—have somewhat lower post-sale basal areas. Virtually all of the mistletoe-infected trees of commercial size (> 9" dbh) have been removed from these stands.

The proposed follow-up treatment for trees < 9" dbh would result in residual basal areas 40 to 60 ft^2 (excluding small openings) in the single-tree selection areas and 20 to 40 ft^2 in the shelterwood portions. All remaining mistletoe-infected ponderosa pine and Douglas-fir would

be cut. To account for latent infections, all host trees (excluding young regeneration less than two feet tall) within 30 to 50 feet of visible infection would also be felled. Uninfested areas and non-host trees would be thinned to 20-foot average spacing, favoring the best crop trees. Species preference would favor healthy ponderosa pine and white pine.

It may be prudent to use somewhat closer average spacing (15 to 18 feet) for crop tree quality saplings in order to make better use of the site and allow for future attrition, especially within openings and understocked areas. In light of a developing budworm outbreak, it should be noted that removal of an undue proportion of the white fir and Douglas-fir understory would have little effect on the duration or severity of the outbreak. Moreover, following the outbreak, many of these young trees would be expected to recover. Certainly a strategy favoring healthy pine (where available) will reduce the overall vulnerability of these stands to budworm. We recommend retaining all crop tree quality white pines in order to retain genetic diversity in this species.

Upper Pine Tree (FY 2006). At the time of this visit, approximately 300 acres of hand-thinning/slashing and 80 acres of machine treatment had been completed in this project area (see our 3420 letter of August 1, 2005). Considerable ips activity was observed in the standing ponderosa pine directly adjacent to the machine-masticated areas, which were treated in April and May. Most likely, the beetles were attracted to the volatiles released by the fresh chips; this, in combination with drought-stress at that time, resulted in the tree mortality. Fortunately, most of the dead trees had heavy mistletoe infection and were slated to be hand-felled as part of the project. When finished, this project will provide a mosaic of openings and groups of healthy young regeneration in an area that had severe dwarf mistletoe infestation.

Budworm Monitoring Proposal (FY 2007 Project 2). A modest amount of FY 2007 funding has been requested by the Agency for monitoring an expanding western spruce budworm outbreak. In 2005, budworm activity was observed in limited areas west of Highway 244. This year, low to moderate levels of defoliation are visible throughout much of the mixed conifer type (50,000+ acres) on the Reservation. Multiple adult moths have been caught in most of the 50 pheromone traps installed earlier year (with 30 to 50+ moths in a majority of these traps), suggesting continued expansion of the population and potential for more severe damage in 2007. Monitoring in 2007 would include trapping throughout the host type, protocol branch beating (larval surveys) in select areas, and data analyses.

Budworm activity in 2006

Summary and Conclusions

The proposed FY 2007 Project 1 should provide effective control of dwarf mistletoe, reduce potential losses from bark beetles, and increase growth on selected crop trees. As in recent years, this project would be implemented via contract with individual Tribal members, through the Tribe's Division of Resource Management and Protection. Over 20,000 acres of commercial forest has been successfully treated at Mescalero utilizing Forest Health funding since 1991. Project 2 (budworm monitoring) would be conducted by Agency personnel; data would be used to inform Tribal leadership on the status of the outbreak and support management planning. Please contact Dave Conklin if you have questions about this evaluation.

Sincerely,

/s/ Debra Allen-Reid
DEBRA ALLEN-REID
New Mexico Zone Leader, Forest Health

cc: Gilbert Zepeda, John Waconda (Southwest Regional Office, BIA); Bernie Ryan and Bill Hornsby (Mescalero Agency); Thora Walsh-Padilla (Mescalero Tribe)